

**IN THE UNITED STATES DISTRICT COURT FOR
THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division**

Raju Chiluvuri,

Plaintiff,

v.

U.S. National Science Foundation,
2415 Eisenhower Avenue,
Alexandria, Virginia 22314,

Defendant.

COMPLAINT

Case No.

Complaint

Plaintiff, Raju Chiluvuri (“Plaintiff”), by and through undersigned counsel, respectfully brings this action against Defendant, U.S. National Science Foundation (“Defendant” or “NSF”), seeking declaratory, injunctive, and compensatory relief. This action arises under 5 U.S.C. § 702 *et seq.*, and the Declaratory Judgment Act, 28 U.S.C. §§ 2201 *et seq.*, and alleges violations of federal statutory and constitutional obligations.

Introduction

The demands that we, as citizens, can properly make upon our Federal Government are not always fully clear. Particularly in this most political of seasons, the expression – “we the people” – has meaning, but such is more profound to some versus others, depending upon one’s political point of view.

Putting disagreements of the outer bounds of such rights aside, there are fundamental rights and expectations that our citizens hold which are readily recognized and not in dispute. These include, for example, the expectations that the Federal Government and its personnel will act lawfully, fairly, and use competent, qualified personnel when making decisions on the award and distribution of taxpayer funds.

Plaintiff Raju Chiluvuri has a deep passion for computer software and in particular, a

discovery he made for the use of a component-based approach to the design and manufacture of computer software. As explained more fully below, Plaintiff has devoted much of his professional life to this discovery and the development of it, and to that end, he has secured eight patents for inventions within this field. His theory and ideas relating to this issue are transformative and will, in his view, dramatically shift the self-imposed “box” that the software design and manufacturing industry has been working within for the past 54 years.

Against this backdrop, Plaintiff expected that he – along with every other similarly situated person – would be treated lawfully and fairly by persons with the necessary competence, when he submitted proposals to the National Science Foundation (“NSF”) to try and secure funding to support the further development and refinement of his component-based approach.

Plaintiff first did this in August 2020, through NSF’s newly implemented “Project Pitch” program, when he submitted his proposal for funding relating to his component-based approach to software design and manufacturing. In response, he was told “no” by NSF and in sum, that his proposal was not selected based upon the purported reason that there is “No Market Pull.”

Plaintiff continued to submit proposals to NSF, some seven additional Project Pitch proposals through July 2023. Each time, NSF told him – “no” using the same boilerplate explanation of NSF’s purported reasons why his proposals did not deserve further scrutiny and support.

Undeterred, Plaintiff filed a lawsuit against NSF in early 2024, through which he alleged that NSF had violated the Freedom of Information Act when it failed to respond to his requests for information relating to his proposals and NSF’s Project Pitch program.

Through his lawsuit, Mr. Chiluvuri discovered internal documents from NSF which demonstrate the wrongful and unlawful conduct of NSF personnel which caused his transformative proposals to be rejected. These include the following:

- NSF used unqualified reviewers to substantively review any of Plaintiff’s proposals, where unqualified reviewers are those who lacked educational background or work experience in the subject matter of Plaintiff’s submissions, software engineering and theoretical computer science that provides foundation for CBSE (Component-Based Software Engineering);
- NSF did not use the widely accepted merit-based review process which it was required to do by Federal law and policy, to include the Federal Scientific Integrity Policy, as well as policy set by its own oversight body, the National Science Board;
- NSF’s reviewers are mandated to identify meritorious submissions strictly in accordance with the policies and principles of NSF’s Merit Review Criteria comprising two parts (i) “intellectual merit” and (ii) “broader impact”;
- NSF did not apply the proper criteria to assess Plaintiff’s proposals, as they ignored the fundamental principles of “intellectual merit” and the “broader impact” that his proposals would have upon the software industry and the beneficiaries thereof;

- NSF's "process" used to reject his proposals was developed and implemented in 2019, when NSF began utilizing a screening process – not to enhance the further discovery of transformative ideas and research, which it is required to do – but to simply ease the workload for its own personnel in reviewing proposals for funding;
- NSF Definition for Transformative Research: Transformative research involves ideas, discoveries, or tools that radically change our understanding of an important existing scientific or engineering concept or educational practice or leads to the creation of a new paradigm or field of science, engineering, or education. Such research challenges current understanding or provides pathways to new frontiers;
- NSF's purported "screening process" was subjective, arbitrary, and unreviewable because it failed to use any objective criteria as part of the evaluation process; and
- NSF was mandated by the NSB and Congress to create an environment that is more open to and encourages transformative research proposals from the research community to support transformative research, however it has failed to do so. Because of this, Plaintiff has been unable to find a viable path for proper validation of his paradigm-challenging fundamental discoveries, which represent a new paradigm or field of science, along with his patented deep technology breakthroughs – without facing rejection by NSF's unqualified staff member.

Plaintiff also sought funding through submissions using NSF's ProSPCT tool, as a separate avenue to gain funding from NSF (i.e., beyond Project Pitch). As explained herein, it is clear that NSF also used unqualified reviewers to review and deny these proposals from Plaintiff.

It is against this backdrop that Plaintiff brings this lawsuit, because since 2019 (in relation Project Pitch), NSF has acted unlawfully in a systematic fashion by utilizing its illegal screening process concerning its evaluation of proposals for funding. It is also now clear to Plaintiff that beyond Project Pitch, NSF is also wrongfully and unlawfully screening proposals for funding using unqualified reviewers. Through such wrongful and illegal conduct, NSF has harmed Plaintiff and, we believe, hundreds of other proposers who submitted proposals and were denied the ability to proceed with NSF's funding process, under similar circumstances.

NSF must be held to account for its wrongful and illegal conduct and to do that, among other forms of relief, NSF must be ordered to follow the law and to immediately stop using its illegal, arbitrary screening process for screening out Project Pitch proposals.

Jurisdiction and Venue

1. This Court has jurisdiction over this action pursuant to 5 U.S.C. § 704 and 28 U.S.C. §§ 1331, 2201, and 2202.
2. Venue is proper in this district pursuant to 28 U.S.C. § 1391(e).

Parties

3. Plaintiff Raju Chiluvuri is a United States citizen living in India and he is the Chief Executive Officer of Pioneer-Soft, a private company registered in Wyoming. Plaintiff's employees have been software researchers and engineers who have developed next-generation tools and inventions to help software developers create next generation software products. Plaintiff worked for 10 years in Silicon Valley, California. In 2001, Plaintiff made fascinating discoveries serendipitously and has been doing this paradigm-challenging research since 2002 and so far, has secured eight software patents in the United States.
4. Defendant U.S. National Science Foundation ("NSF") is an agency of the federal government within the meaning of 5 U.S.C. § 551(1).

Facts

A. NSF's Mission: To Identify, Fund, and Develop Transformative Research

5. The National Science Foundation is an independent federal agency created by the National Science Foundation Act of 1950. NSF's mission is "to promote the progress of science; to advance national health, prosperity, and welfare; and to secure the national defense."
6. As an independent federal agency, NSF operates independently of any other agency and only under the purview of the President. The NSF's director is appointed by the President and confirmed by the Senate. The agency's policies are decided by a 24-member National Science Board ("NSB" or "Board") that meets six times per year.
7. Like any other federal agency, the funds used by NSF are appropriated by the United States Congress.
8. By law, NSF is "authorized and directed – (1) to initiate and support basic scientific research and programs to strengthen scientific research potential and science education programs at all levels in the mathematical, physical, medical, biological, social, and other sciences, and to initiate and support research fundamental to the engineering process and programs to strengthen engineering research potential and engineering education programs at all levels in the various fields of engineering, by making contracts or other arrangements (including grants, loans, and other forms of assistance) to support such scientific, engineering, and educational activities and to appraise the impact of research upon industrial development and upon the

general welfare” 42 U.S.C. § 1862(a).

9. In 2004, the NSB established the Task Force on Transformative Research (“Task Force”) to serve as a focal point for the NSB to gain a better understanding of NSF’s policies to solicit, identify, and fund innovative, “potentially transformative research” (PTR).

B. NSF Must Use Merit-Based, Competitive Review Processes in Awarding Funds

10. In 2007, the NSB published its pivotal report – “Enhancing Support of Transformative Research at the National Science Foundation,” NSB-07-32 (May 7, 2007) (“2007 Report”). Its findings and recommendations are critical to consider in assessing the extent to which NSF has fulfilled its required mandate to identify and fund transformative research.
11. In its 2007 Report, the NSB defined “transformative research” as research driven by ideas that have the potential to radically change our understanding of an important existing scientific or engineering concept or lead to the creation of a new paradigm or field of science or engineering. Such research is also characterized by its challenge to current understanding or its pathway to new frontiers.
12. Through its 2007 Report, the NSB emphasized the critical nature of transformative research to the nation and that it was imperative for NSF to take steps to increase and improve its efforts to identify and fund such projects. The Board explained its rationale in part as follows: “Transformative research frequently does not fit comfortably within the scope of project-focused, innovative, step-by-step research or even major centers, nor does it tend to fare well wherever a review system is dominated by experts highly invested in current paradigms or during times of especially limited budgets that promote aversion to risk.”
13. The NSB further explained that roadblocks frequently exist to the identification and funding of proposals that are transformative in nature, stating: “The Report of the National Science Board on the National Science Foundation’s Merit Review System concludes that the Foundation’s merit review system remains an international ‘gold standard’ for the review of science and engineering research proposals. Still, the Board finds that investigators are reluctant to submit radical or paradigm-challenging research ideas to NSF given the low conventional success rate (over \$2 billion of highly rated proposals were declined in FY 2004). These unsubmitted proposals are critical missed opportunities. By its very nature, transformative research often is challenging to and frequently crosses disciplines. It questions the status quo by proposing new (sometimes radically new) ways of approaching a fundamental scientific question. Experts in the areas being challenged (many of whom may sit on review panels) may dismiss such ideas by pronouncing the research overreaching or without basis. Consequently, such ideas can remain hidden or discouraged and their breakthrough discoveries delayed or even missed.” (Emphasis added.)

14. In response to the NSB’s 2007 Report, NSF acknowledged the critical importance of using a merit-review process to determine which projects to fund, emphasizing that such a process must prioritize transformative research, novel approaches to significant questions, and new and promising research areas. NSF explained its view of “transformative research” as research that promises extraordinary outcomes, such as “revolutionizing entire disciplines; creating entirely new fields; or disrupting accepted theories and perspectives — in other words, those endeavors which have the potential to change the way we address challenges in science, engineering, and innovation. Supporting more transformative research is of critical importance in the fast-paced, science and technology-intensive world of the 21st Century.”
15. NSF’s obligation to utilize a merit-review process in determining which projects to fund is not merely an optional goal but a requirement as a matter of law. The National Science Board (“NSB”) establishes and updates the “Merit Review Criteria” to ensure fairness and integrity in the evaluation of submissions. (See: <https://seedfund.nsf.gov/resources/review/merit-review/>).
16. The review process mandates adherence to strict guidelines for intellectual merit and broader impact. These principles were designed to ensure that the most transformative, high-impact research receives appropriate evaluation and support. Federal agencies like NSF must not deviate from these published protocols without public notice and justification.
17. A hallmark requirement of the merit-based review process is the use of external reviewers with substantive expertise. NSF has access to a vast network of experts, including thousands from research organizations and universities that have received NSF funding. NSF receives tens of thousands of submissions each year, and it is part of NSF’s core operations to assemble a panel of experts to validate each of those submissions. Despite this, NSF elected to violate the law for the sake of expediency and to unfairly screen out proposals such as Plaintiff’s through its Project Pitch screening process.
18. Every scientist with ethics, honesty, and integrity must recuse themselves if they realize they are not a subject matter expert in the field of the submission to assess “Intellectual Merit,” which proposes activities to create or utilize new scientific knowledge and insights, which are creative, and original or unknown to the rest of the world.
19. To that end, in January 2023, the White House Office of Science and Technology (OSTP) published the Framework for Federal Scientific Integrity Policy and Practice. This policy governs all federal research agencies, including NSF, and requires such agencies to uphold scientific ethics and transparency. (See: <https://www.whitehouse.gov/wp-content/uploads/2023/01/01-2023-Framework-for-Federal-Scientific-Integrity-Policy-and-Practice.pdf>)
20. NSF officers and reviewers are obligated to ensure scientific integrity by recusing themselves from reviewing proposals they are unqualified to assess aspects thereof, such as valid scientific evidence and rationale. Failure to do so constitutes professional misconduct and

violates the public trust in taxpayer-funded research. As explained below, such also violates the law. The arbiter of scientific truth is valid and verifiable evidence, so ignoring or suppressing valid scientific evidence is unethical and constitutes scientific misconduct.

21. These requirements are intended to safeguard the transparency, fairness, and integrity of the review process. The paramount requirement is rigorously validating new evidence objectively with an open mind and an unwavering loyalty to valid and verifiable scientific evidence. NSF program officers and reviewers are required to comply with these standards to prevent misconduct and abuse of power.

C. NSF's Systematic Violations of the Law Concerning Its Small Business Innovation Research Funding Program

22. Under 15 U.S.C. § 638, NSF is required to establish an "Office of Small Business Research and Development." Through this, Congress mandated that federal agencies must provide assistance "to small-business concerns to enable them to undertake and to obtain the benefits of research and development in order to maintain and strengthen the competitive free enterprise system and the national economy."
23. Under 15 U.S.C. § 638(3), the term "funding agreement" is defined to include "any contract, grant, or cooperative agreement entered into between any Federal agency and any small business for the performance of experimental, developmental, or research work funded in whole or in part by the Federal Government."
24. Under 15 U.S.C. § 638(4), the term "Small Business Innovation Research Program" is defined as "a program under which a portion of a Federal agency's research or research and development effort is reserved for award to small business concerns through a uniform process" (having several mandatory attributes). These mandatory attributes include the following:
 - A "first phase" for "determining, insofar as possible, the scientific and technical merit and feasibility of ideas that appear to have commercial potential, as described in subparagraph (B), submitted pursuant to SBIR program solicitations"; and
 - A "second phase" – "which shall not include any invitation, pre-screening, or pre-selection process for eligibility for Phase II, that will further develop proposals which meet particular program needs, in which awards shall be made based on the scientific and technical merit and feasibility of the proposals, as evidenced by the first phase, considering, among other things, the proposal's commercial potential, as evidenced by:
 - (i) the small business concern's record of successfully commercializing SBIR or other research;

(ii) the existence of second phase funding commitments from private sector or non-SBIR funding sources;

(iii) the existence of third phase, follow-on commitments for the subject of the research; and

(iv) the presence of other indicators of the commercial potential of the idea.”
(Emphasis added.)

25. In so doing, NSF is required to adhere to the requirements of 15 U.S.C. § 638(s):

(s) Competitive selection procedures for SBIR and STTR programs: “All funds awarded, appropriated, or otherwise made available in accordance with subsection (f) or (n) **must be awarded pursuant to competitive and merit-based selection procedures.**” (Emphasis added.)

26. NSF is aware of this legal obligation, and has affirmed this to the United States Congress and to the public. By way of example, in NSF’s PTR Report to Congress (on April 16, 2008), the agency stated (Ref: https://www.nsf.gov/attachments/111247/public/PTR_Report_Consolidated_Approps_FY_08.PDF):

“Supporting Potentially Transformative Research (PTR) is central to the vision of the National Science Foundation (NSF). Congress, the National Science Board and the scientific community all want to ensure the NSF’s support to PTR remains strong.”

“PTR Proposals may request support for dramatically new ways of conceptualizing and addressing major scientific and technological challenges.”

27. Despite its clear mandate to do so, and despite NSF’s own acknowledgment that it must increase its efforts to identify and fund proposals for transformative research and in so doing, utilize a merit-based selection process, NSF has systematically failed to do so. Moreover, as demonstrated by the wrongful and unlawful manner in which NSF has treated Plaintiff’s proposals, this letter by NSF to Congress is clearly false and misleading.

28. NSF’s failures in identifying and funding transformative research using the required merit-based selection processes have long been an issue. This was explained by the late Senator Tom A. Coburn, M.D., in his report, *“National Science Foundation: Under the Microscope,”* April 2011: “Real, transformative research should be the standard for all NSF-supported projects.” Coburn added: “NSF’s mission is to fund transformative research that finds ‘novel’ approaches to significant scientific questions.” However, Coburn noted that “Very few of the proposals submitted for NSF financial support represented transformative scientific research according to most grant reviewers surveyed.”

29. Senator Coburn’s report further identified “over \$3 billion in mismanagement at NSF,” which included “tens of millions of dollars spent on questionable studies, excessive amounts of expired funds that have not been returned to the Treasury, inadequate contracting practices that unnecessarily increase costs, and a lack of metrics to demonstrate results.” Examples of highly questionable studies funded by NSF cited by Coburn included:
- How to ride a bike;
 - When dogs became man’s best friend;
 - Whether political views are genetically pre-determined;
 - How to improve the quality of wine;
 - Whether boys like to play with trucks and girls like to play with dolls;
 - How rumors get started;
 - Whether parents choose trendy baby names;
 - How much housework a husband creates for a wife;
 - When is the best time to buy a ticket to a sold-out sporting event;
 - A review of event ticket prices on stubhub.com;
 - A “robot hoedown and rodeo;”
 - A virtual recreation of the 1964/65 New York World’s Fair.
30. NSF’s grant-making process was subsequently questioned by four U.S. Senators in 2018 through their request for NSF’s Inspector General to conduct an investigation into concerns that “NSF has ‘issued several grants which seek to influence political and social debate rather than conduct scientific research’ in contradiction of federal law and the agency’s mission.” See Press Release: “*Sens. Cruz, Paul, Lankford, and Inhofe Call for Investigation at the National Science Foundation*,” June 20, 2018, available at: <https://www.cruz.senate.gov/newsroom/press-releases/sens-cruz-paul-lankford-and-ihofe-call-for-investigation-at-the-national-science-foundation>. Examples cited by these Senators in their letter to the OIG included NSF “‘providing over four million dollars to a climate-change coalition to turn television meteorologists into climate change evangelists (with almost three million coming after initial research revealed a significant lack of consensus on climate change among meteorologists), as well as a grant to increase the engineering industry’s activism on social justice issues.’” The Senators further explained: “‘Research designed to sway individuals of a various group, be they meteorologists or engineers, to a politically contentious viewpoint is not science—it is propagandizing. Such efforts certainly fail to meet the standard of scientific research to which the NSF should be devoting federal taxpayer dollars. . . .’”
31. NSF’s failures in this regard have continued, most recently exemplified through the arbitrary process that it uses in relation to SBIR, which Plaintiff only recently discovered through records obtained via a lawsuit pursuant to the Freedom of Information Act (FOIA).
32. In 2019, through its SBIR, NSF began utilizing a screening process through which small businesses and start-up companies, like Plaintiff’s, could submit a “Project Pitch” as the first

step in obtaining funding.

33. According to NSF, if it determines that a Project Pitch is a “good fit for the program,” it will extend “an official invitation from NSF to submit a full proposal.” See “*Project Pitch*,” *AMERICA’S SEED FUND*, <https://seedfund.nsf.gov/project-pitch/> (last visited July 19, 2024); see also ECF No. 22, p. 2, n. 2. In implementing this screening process,
34. Importantly, NSF did not engage in notice-and-comment rulemaking when it adopted and implemented this screening process.
35. As noted above, in early 2024, Plaintiff sued NSF for violations of the Freedom of Information Act (“FOIA lawsuit”) concerning his requests for information relating to its Project Pitch review process and the review and rejection of his proposals.
36. Documents obtained by Plaintiff through his FOIA lawsuit demonstrate that NSF implemented its “Project Pitch” program—not as a method to enhance its identification and funding of transformative research—but rather as a screening mechanism primarily to reduce the volume of formal proposals for funding it received each year from small businesses and start-up companies, like Plaintiff’s.
37. High-ranking NSF personnel internally referred to this program as a “Phase I suitability review” and noted—in a Memorandum signed by NSF’s Chief Operating Officer on February 14, 2019—the following:

“The required pre-submission suitability review of potential SBIR/STTR Phase I projects **will focus solely on programmatic fit** as defined by the associated SBIR/STTR Phase I solicitation criteria.” (Emphasis added.)
38. In attempting to justify this screening process, Jean Feldman, Head of the Policy Office for NSF, noted that NSF, by moving to this process, would be “unique” [compared with other federal agencies’ approaches to their own SBIR/STTR programs]. Another NSF staff member wrote that “Most SBIR/STTR Agencies publish their eligibility criteria online for applicants to review without a pre-screening process.” This staff member also noted that the Department of Energy was the only agency known to use an initial screening process for applicants for funding. However, even if a proposal to DOE was deemed not a good fit for funding, such feedback would not prevent an applicant from submitting a full Phase I funding proposal. In stark contrast, this staff member noted that NSF’s pre-screening process would result in a binding “invite” or “do not invite” decision, which, if negative, would preclude the proposer from submitting another proposal for a specified period.

D. Plaintiff's Fundamental, Transformative Theory for Design and Manufacture of Computer Software Using a Component-Based Approach

39. Plaintiff has worked in various aspects within the field of software engineering since 1988 and has dedicated the past 23 years to researching solutions to the software crisis after serendipitously discovering a new kind of software component essential for building software products as Component-Based Products (CBPs). The Plaintiff holds a BE degree in Electronics & Communications Engineering from Andhra University (India) and an MS degree in Computer Science from Ohio University, with a 4.0/4.0 GPA. His professional experience includes 10 years in Silicon Valley, California, where he held positions such as Project Lead at Advansoft Research (a subsidiary of Fujitsu Corporation), Senior Technical Staff at Oracle Corporation, and Senior Software Designer at KLA-Tencor.
40. Plaintiff also founded and managed a software services company from 1997 to 2003 in India. The company's services included maintaining an ERP and Big Data processing product for KLA-Tencor, for which the Plaintiff was a chief designer. This product was installed in 90% of semiconductor fabs globally and was managed by the Plaintiff's company from India.
41. In 1999, Plaintiff developed a GUI-API software product capable of building complex 2D/3D graphics-intensive, real-time, data-driven web applications. Through this work, he discovered a new type of software component, which led him to dedicate his career fully to research beginning in 2003. This research culminated in significant discoveries regarding real software components and real Component-Based Design (CBD)/Component-Based Engineering (CBE) software.
42. Plaintiff holds eight patents related to the design and production of computer software using a component-based approach for constructing software products as CBPs.
43. Between 2020 and 2023, Plaintiff submitted seven applications for funding to NSF's Project Pitch program, aimed at supporting his ongoing research into software design and manufacturing. NSF declined to invite the Plaintiff to submit a full proposal for funding in each instance. These denials were binding and precluded the Plaintiff from submitting full Phase I funding proposals during designated periods.

E. Discovery of Evidence of NSF's Unlawful Conduct through Plaintiff's FOIA Lawsuit

44. In February 2024, Plaintiff filed the FOIA lawsuit because NSF failed to respond to three separate FOIA requests for information related to the qualifications of reviewers for his Project Pitch submissions and the processes used for their review.
45. Through this lawsuit, Plaintiff obtained records and discovered evidence showing:
 - a. Each of the Plaintiff's submissions was reviewed only internally by NSF personnel, without the involvement of external reviewers.

- b. The Project Pitch evaluation did not involve a merit-based, competitive process similar to that used for full Phase I SBIR proposals.
- c. None of Plaintiff's submissions underwent a review involving substantive, merit-based assessment.
- d. The reviewers assigned to Plaintiff's submissions did not hold formal degrees in software engineering or relevant experience in designing and manufacturing software.
- e. NSF personnel did not employ any objective criteria or rating system that could be reviewed later to ensure proper application.
- f. NSF communicated the reasons for rejecting the Plaintiff's Project Pitch using boiler plate rejection that gave very short incorrect reasons such as "No Market Pull" or "NSF/SBIR do not support Basic Research" (which are wrong in the context of Plaintiff's submissions of patented inventions to address the infamous software crisis), without offering an avenue for the Plaintiff to request a higher-level review.
- g. Plaintiff did not receive meaningful, substantive feedback on the deficiencies purportedly found in his submissions, and his repeated e-mails and voicemails requesting useful details were ignored.

F. NSF's Failure to Use Qualified Reviewers Extends Beyond Its Illegal Screening Through Project Pitch

- 46. As noted above, NSF is mandated by Congress and the NSB to create an environment that encourages and supports transformative research proposals. This commitment is reiterated in multiple NSF policy documents and communications with Congress, such as:
 - NSB's PTR Policy: <https://www.nsf.gov/pubs/2007/nsb0732/nsb0732.pdf>
 - NSF's PTR Report to Congress, dated 16th April, 2008: https://www.nsf.gov/attachments/111247/public/PTR_Report_Consolidated_Approps_FY_08.PDF
- 47. In 2005, the NSB mandated the 2020 Vision for the NSF: "The National Science Foundation must support the most innovative and potentially transformative research—research that has the capacity to revolutionize existing fields, create new subfields, cause paradigm shifts, support discovery, and lead to radically new technologies... The Foundation must create an environment that is more open to and encourages transformative research proposals from the research community."

48. In NSF's PTR Report to Congress (April 16, 2008), NSF modified the "Intellectual Merit Review Criterion" to be applied, as follows:

"What is the intellectual merit of the proposed activity?"

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.) To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

All proposals received after January 5, 2008 are being reviewed using the revised criterion. Program officers are instructing reviewers to pay special attention to those proposals that may include PTR." (Emphasis added)

49. In its PTR Report to Congress, NSF further acknowledged the critical requirement to identify and provide support to potentially transformative research:

"Supporting Potentially Transformative Research (PTR) is central to the vision of the National Science Foundation (NSF). Congress, the National Science Board and the scientific community all want to ensure the NSF's support to PTR remains strong."

"PTR Proposals may request support for dramatically new ways of conceptualizing and addressing major scientific and technological challenges."

50. NSF has been utilizing a "Program Suitability & Proposal Concept Tool" (ProSPCT) (u), which it asserts is particularly targeted for high-impact "Transformative Research": <https://new.nsf.gov/funding/learn/research-types/transformative-research>. This is a tool that NSF uses, to Plaintiff's understanding, as another gateway to try and get funding from NSF (i.e., under programs beyond Project Pitch and Phase I – SBIR funding).
51. NSF.gov solicits and encourages submissions for transformative discoveries in science and engineering, claiming that identifying and funding such work is central to its mission.
52. Despite this, and despite its mandate to use a merit-based review process in funding research proposals – to include through its ProSPCT tool, Plaintiff has also discovered that NSF is not doing so.
53. Plaintiff submitted three proposals through NSF's ProSPCT tool (INQ-24-03624, INQ-25-03641, and INQ-25-03643), demonstrating that the existing theoretical foundation for CBSE (Component-Based Software Engineering) is fatally flawed, which is the root cause of the infamous software crisis (responsible for thousands of deaths and injuries).

54. NSF publicly states that submissions (a “concept outline”) made through its ProSPCT tool “will be routed within NSF for initial review by relevant program staff and made available to other NSF units with expertise germane to the project topic. An assigned cognizant Program Officer will respond to your submission. Please note, concept outlines are not full proposals and need only convey sufficient information for a Program Officer to determine whether submission of a full proposal is warranted.” See: <https://suitability.nsf.gov/s/>.
55. Despite this public declaration, and despite the merits of Plaintiff’s submissions, NSF employed unqualified reviewers who failed to recognize the transformative nature of the discoveries. These reviewers mischaracterized Plaintiff’s work and denied Plaintiff’s requests for evaluation of his submission INQ-24-03484 by experts familiar with the challenges of paradigm shifts, such as problems associated with incommensurability – an essential and well-documented characteristic of transformative breakthroughs.
56. This is demonstrated through the response provided by NSF concerning Plaintiff’s submissions through ProSPCT:
 - a. Submission INQ-25-03643 detailed the creation of a new field of science called **Componentology** (<http://componentology.org/>), which provides the theoretical foundation for conducting applied research in Software Engineering, particularly in Component-Based Software Engineering (CBSE) to address the infamous software crisis. Componentology studies and accumulates scientific knowledge about physical component-based products (CBPs) such as cars, computers, and jet-fighters, and the methods and mechanisms for assembling components to create their virtual equivalents.
 - b. Submissions INQ-24-03502 and INQ-25-03641 proposed the creation of a new field of science called **Neuronology** (<http://neuronology.org/>) to provide a scientific or theoretical foundation for conducting applied research in Artificial General Intelligence (AGI) and related fields such as Neuralink and bio-cellular computing. Neuronology for AGI involves studying the structure and function of biological neurons and their connections in neural networks. This knowledge can be used to develop artificial neural networks, which are computational models that simulate the behavior of neurons and synapses.
 - c. Neuronology is a newly proposed branch of science aimed at providing a valid scientific and theoretical foundation for AGI (Artificial General Intelligence), just as Componentology was created to establish a valid foundation for CBSE. Effectively addressing each technological challenge requires a solid scientific and theoretical foundation. In most engineering disciplines (e.g., mechanical, electronics, aerospace, or pharmaceutical products), research is grounded in established scientific foundations from various subfields of physics, chemistry, or biology. When such a valid scientific foundation is unavailable to address an unsolved technological challenge, creating one becomes essential.

57. Despite the completely different nature of these proposals by Plaintiff (i.e., Componentology versus Neuronology), he received the following feedback from the cognizant program staff at NSF:

"Based on the information provided (i.e., INQ-24-03502 for Neuronology), **this submission duplicates, or is substantially similar to, a submission that has already been considered by NSF**; therefore, it is being closed out. **Please see the response to INQ-25-03643 (for Componentology).**" (Emphasis added).

58. This boilerplate response demonstrates that the NSF staff member (or members) who purportedly reviewed Plaintiff's proposal concerning Neuronology was wholly unqualified to do so, as there is no possible way that a qualified reviewer would conclude that the two proposals were "duplicates" or "substantially similar."
59. This conduct by NSF violates the requirements for its review of submissions through ProSPCT, based upon the provisions of NSB's PTR Policy; NSF's own PTR Letter to Congress; and the Federal Scientific Integrity Policy.
60. Plaintiff submits that an "Unqualified Reviewer or Panelist" for a submission is a reviewer or panelist who lacks the necessary educational background or work experience in the subject matter of the submission.
61. NSF's definition of such is closely similar. In its Proposal & Award Policies & Procedures Guide (NSF 22-1, October 4, 2021, Chapter III),¹ NSF stated as follows:

"B. Selection of Reviewers

The NSF guidelines for the selection of reviewers are designed to ensure selection of experts who can give Program Officers the proper information needed to make a recommendation in accordance with the NSB-approved criteria for selection of projects. **Optimally, reviewers should have:**

1. **Special knowledge of the science and engineering subfields involved in the proposals to be reviewed to evaluate competence, intellectual merit, and utility of the proposed activity.** Within reasonable limits, reviewers' fields of specialty should be complementary within a reviewer group.
2. Broader or more generalized knowledge of the science and engineering subfields involved in the proposals to be reviewed to evaluate the broader impacts of the proposed activity. Reviewers with broad expertise are required for proposals involving substantial size or complexity, broad disciplinary or multidisciplinary content, or significant national or international implications.

¹ Available at: https://www.nsf.gov/pubs/policydocs/pappg22_1/pappg_3.jsp#IIIA2.

3. Broad knowledge of the infrastructure of the science and engineering enterprise, and its educational activities, to evaluate contributions to societal goals, scientific and engineering personnel, and distribution of resources to organizations and geographical areas.
4. To the extent possible, diverse representation within the review group. The goal is to achieve a balance among various characteristics. Important factors to consider include type of organization represented, reviewer diversity, age distribution and geographic balance.” (Emphasis added)
62. NSF employed unqualified reviewers lacking the required educational background or work experience in the subject matter to evaluate the submissions. A reviewer or panelist is unqualified to substantively review a proposal like Plaintiff’s ProSPCT and his Project Pitch proposals if the reviewer does not possess relevant education and expertise in the substantive field they are reviewing. The NSF’s merit review principles require that reviewers possess such expertise to render valid evaluations.
63. It is impossible for reviewers to adhere to the Merit Review Criteria or Scientific Integrity Policy without understanding them. Therefore, employing unqualified reviewers is a fundamental violation of these principles and policies.
64. NSF’s rejection of Plaintiff’s submissions based on the Program Suitability & Proposal Concept Tool (ProSPCT) and Project Pitch review processes demonstrates a lack of a viable path for submitting genuine transformative research. These processes, by design, allow unqualified reviewers to dismiss paradigm-shifting discoveries without proper evaluation.
65. Plaintiff is unable to find a viable path to submit his paradigm-challenging transformative breakthroughs because of NSF’s use of unqualified reviewers. Despite public claims that supporting transformative research is central to NSF’s mission, NSF’s current processes – such as Project Pitch and ProSPCT – have no viable pathway to validate, support, or properly review paradigm-shifting breakthroughs, denying critical support to deserving submissions like Plaintiff’s and those of potentially hundreds of other reviewers.
66. Plaintiff has learned the hard way that NSF has been violating its legal obligations concerning its obligation to review his proposals, and the proposals submitted by potentially hundreds of other proposers, using a merit-based process which includes the use of substantively qualified reviewers. Until NSF stops employing unqualified reviewers, it will continue to deny critical opportunities for highly deserving proposers, such as Plaintiff, who bring forward paradigm-challenging, transformative research for funding and other forms of support from NSF.
67. Plaintiff submits that every past paradigm-challenging breakthrough has faced problems related to incommensurability, and it is inevitable that almost every future breakthrough will encounter similar challenges. It is impossible for reviewers to identify paradigm-challenging breakthroughs if they are unaware of, or lack an understanding of, the problems associated with incommensurability (which includes fierce resistance and hostilities, due to their nature

of challenging deeply entrenched conventional wisdom, climate of opinion based on false foundational assumptions or orthodoxies of the day).

68. Almost every paradigm-challenging breakthrough is also an iconoclastic truth/theory that challenges deeply entrenched orthodoxies. Plaintiff has been enduring the problems associated with incommensurability for nearly 18 years. The essential nature and essential characteristics of paradigm-challenging breakthroughs are extensively explained in NSB's PTR Policy: <https://www.nsf.gov/pubs/2007/nsb0732/nsb0732.pdf>, and in this Stanford University webpage: <https://plato.stanford.edu/entries/incommensurability/>.
69. It is impossible for NSF to fulfill the mission of identifying and supporting paradigm-challenging transformative breakthroughs or iconoclastic discoveries that can usher in paradigm shifts, if reviewers of submissions for valid iconoclastic truths/theories are unaware of the problems associated with "incommensurability", which is an inseparable aspect of almost every paradigm-challenging transformative breakthrough.
70. Almost every paradigm-challenging breakthrough in the past has won the highest awards in its respective field, such as the Nobel Prize or the ACM Turing Award. These breakthroughs are so rare that they come along only once every few decades, constituting a small subset (i.e., less than 10%) of the highest awards in those fields.
71. It is also impossible to identify paradigm-challenging discoveries or valid iconoclastic truths/theories, if the reviewers are unaware of the essential characteristics, inseparable aspects or attributes associated with almost every paradigm-challenging discovery of the past, which are well documented in the history and philosophy of science by researchers who endured the problems associated with incommensurability while transitioning from the flawed dominant paradigm of the day to new valid paradigm created to replace the flawed paradigm.
72. Plaintiff's ProSPCT submission was rejected by NSF. Their response effectively demonstrated that do not review or support submissions that are incommensurable. This is the equivalent of stating that the NSF does not review or support paradigm-challenging breakthroughs. Through INQ-24-03484, Plaintiff explained that his efforts to replace pseudoscience in the existing theoretical foundation with the hard scientific knowledge of Componentology have encountered fierce resistance and issues of incommensurability for nearly 16 years. The refusal by NSF to meaningfully consider the legitimacy of competing scientific concepts (or paradigms) violates the agency's PTR Policy. This was arbitrary and capricious, because the NSB's PTR Policy mandates NSF to objectively adjudicate the legitimacy of two competing scientific concepts (i.e., paradigms) when sufficient verifiable evidence is provided to clearly establish that one is pseudoscience and the other is grounded in hard science.
73. As with Plaintiff's most recent ProSPCT submission, Plaintiff's "Project Pitches" were similarly rejected with boilerplate reasons such as "No Market Pull," which is irrational given that NSF and other federal agencies have invested tens of billions of dollars since 1991 to address the infamous software crisis under programs such as

<https://www.nitrd.gov/coordination-areas/spsq/>. Additionally, another reason given by NSF, that "NSF does not support basic research" is meritless, as Plaintiff had already established basic science and provided a list of seven granted patents obtained through applied research based on that basic science. The reviewer's assertion reflects ignorance of the fact that patents are not granted for basic or pure research.

74. In Plaintiff's FOIA lawsuit, NSF, through its counsel, admitted that it did not involve any outside reviewers for Plaintiff's submissions and that no internal or external communications were available concerning such reviewers. NSF also confirmed that no communications from internal reviewers were documented, as the Project Pitch process was designed to be reviewed summarily and either declined or invited without extensive analysis.
75. NSF's counsel further stated that while there might be records related to the review of the Plaintiff's project pitches and the decisions not to invite him to submit full proposals, these records were "notational in nature" because a Project Pitch is not a full proposal.
76. NSF later provided records confirming Plaintiff's allegations stated in paragraph 39(a) through 39(e).
77. Plaintiff has suffered damages as a result of NSF's arbitrary and capricious process. Had any of Plaintiff's Project Pitch proposals been accepted, he would have been eligible to apply for Phase I SBIR funding, currently set at \$275,000. This funding would have significantly supported Plaintiff's research and lent credibility to his work, an essential aspect for advocating for his approach within the software design and development field.
78. Plaintiff's component-based approach holds the significant potential to revolutionize software design and manufacturing.
79. Plaintiff's theory is based on specific ideas and processes that are protected by the following eight U.S. patents, which are essential for building large software products as Component-Based Products (CBPs). These inventions can address the long-standing software crisis by enabling the creation and use of pluggable software components, which are fundamental for building CBPs. It is impossible to create and utilize such pluggable software components without infringing the Plaintiff's patents:
 - Patent No. 7,827,527 (Nov. 2, 2010): System and method of application development.
 - Patent No. 7,840,937 (Nov. 23, 2010): Building software components.
 - Patent No. 8,527,943 (Sep. 3, 2013): System and method of application development.
 - Patent No. 8,392,877 (Mar. 5, 2013): System and method of application development using replaceable self-contained components.
 - Patent No. 8,578,329 (Nov. 5, 2013): System and method of application development using easier-to-redesign replaceable components.
 - Patent No. 9,058,177 (Jun. 16, 2015): Real software components for achieving real

component-based design.

- Patent No. 10,949,171 (Mar. 16, 2021): Tools, mechanisms, and processes for transforming modules for an application into pluggable modules.
- Patent No. 11,275,567 (Mar. 15, 2022): Making communication interfaces pluggable by using mechanisms comprising exchange/broker for communication interfaces.

New inventions, like the microscope and telescope, played a crucial role not only in making groundbreaking scientific discoveries but also in gathering the evidence essential to support transformative discoveries. It is impossible for NSF reviewers to objectively validate submissions involving such paradigm-shifting discoveries or evidence without access to and use of these new enabling inventions that are essential to conduct scientific experiments for acquiring crucial scientific evidence or data. Plaintiff's patented tools and technologies played a crucial role in creating and evolving a new field of study Componentology.

80. Plaintiff has established a new field of study called "Componentology," which is transformative in nature, akin to Germ Theory or Heliocentrism. If validated, approved, and accepted within the field, it would fundamentally change the paradigm of computer software design and production. Plaintiff believes that the use of his theory would:
 - a. Dramatically increase the efficiency of software design, production, and maintenance;
 - b. Significantly improve the safety and reliability of software;
 - c. Accelerate the pace of innovation; and
 - d. Enable the creation of more complex software systems that address issues currently deemed impractical to tackle.
81. A key aspect of many great discoveries lies in challenging and exposing false assumptions. When the theoretical foundation of a widely practiced discipline contains one or more minor false assumptions, uncovering and addressing them exceeds standard requirements for intellectual merit and broader impact, as it provides new scientific insights with potentially far-reaching implications. If these false assumptions are foundational principles (also known as first principles) of a widely practiced paradigm with millions of active practitioners, discoveries that expose such flaws represent quintessential examples of paradigm-challenging breakthroughs.
82. Notable examples of false, widely accepted paradigms include the geocentric model and miasma theory, both of which were based on fundamentally flawed assumptions. It is inevitable that new paradigms created to replace these false ones encounter challenges related to incommensurability. Every discipline built on incorrect foundational assumptions will eventually become flawed and fall into crisis. Reviewers who are unaware of or unable to recognize the risks posed by untested or unproven false foundational assumptions are unqualified to assess or validate paradigm-challenging discoveries. Justifying the use of untested and unproven assumptions in a theoretical foundation blatantly violates the scientific method, as well as principles of integrity and ethics.

83. NSF stated in this insightful white paper about scientific knowledge and its vital role in shaping our understanding that drive technological developments:

“In science and technology, ‘to understand’ is a powerful concept. Understanding forms the foundation for all technological development. There is a symbiotic relationship between fundamental understanding and the technologies that underpin the nation’s economy, security, and the health and well-being of our society.”

Available at:

https://www.nsf.gov/attachments/118651/public/MPSAC_Basic_Research_White_Paper.pdf

84. The NSB has mandated that NSF must support innovative and transformative research, to wit:

“The National Science Foundation must support the most innovative and potentially transformative research – research that has the capacity to revolutionize existing fields, create new subfields, cause paradigm shifts, support discovery, and lead to radically new technologies... The Foundation must create an environment that is more open to and encourages transformative research proposals from the research community.”

85. Plaintiff submits that it is impossible for NSF to fulfill this mandate without understanding (i) the fatal consequences if the preparadigmatic foundational assumptions (e.g., the Earth is at the center of the solar system) of a dominant paradigm are fundamentally flawed, and (ii) the complex challenges associated with incommensurability when replacing a widely practiced, flawed dominant paradigm (e.g., geocentric theory or miasma theory) with a valid, hard scientific paradigm (e.g., heliocentrism or germ theory).

The theoretical foundation for every dominant paradigm comprises numerous theories, concepts, descriptions, and explanations that are consistent with one another; however, they are radically different from those in competing new paradigms that aim to replace an existing flawed paradigm. This contradictory perception of realities creates friction and resistance by offending deeply entrenched orthodoxies and is a source of problems associated with incommensurability.

<https://plato.stanford.edu/entries/incommensurability>. NSF has publicly recognized this, stating through its Letter to Congress: “PTR Proposals may request support for dramatically new ways of conceptualizing and addressing major scientific and technological challenges.”

86. Plaintiff’s discovery of Componentology concerning the component-based approach to software design and manufacturing is transformative and will dramatically shift the paradigm for such. Componentology offers dramatically new ways of conceptualizing solutions to address one of the greatest technological challenges that has eluded software researchers for decades. However, through this above-referenced conduct, NSF has unlawfully denied Plaintiff a critical opportunity to further develop and refine his theory. The same holds true concerning NSF’s wrongful rejection of Plaintiff’s proposal regarding Neuronology.

G. NSF's Personal Bias and Discrimination Against Plaintiff

87. Plaintiff is a U.S. citizen originally from India. As such, he is entitled to be treated fairly, as with any native-born U.S. Citizen. However, English is not his first language, which is evident from his written and verbal communications.

88. Through his FOIA lawsuit, Plaintiff also discovered documents which demonstrate that in November 2020, NSF personnel blocked its personnel from receiving further communications (i.e., emails) from Plaintiff. In an email message of November 17, 2020, Carol Bessel stated:

“Since I know that many of you are getting copied on all of Mr. Chiluvuri’s emails: **Please just ignore his emails (and you might screen your calls a bit – he has called me from area code 919). NSF is working hard to block his correspondence** - he seems to be changing addresses and so it is difficult. If you have any questions or concerns, please let me know. I am sorry this keeps coming to your inbox....” (Emphasis added).

Upon information and belief, Plaintiff believes that NSF continued to pursue this approach of blocking his communications with NSF staff members about his proposals for funding.

89. Plaintiff submits that NSF undertook this action – which on its face is outrageous and wrongful towards a fellow U.S. Citizen – because of Plaintiff’s race (Asian) and ethnicity (Indian) and because of his accent and style of writing, due to the fact that English is not his native language.

90. Such conduct by NSF personnel is wrongful and constitutes illegal discrimination against Plaintiff. It also demonstrates that at some point after Plaintiff first submitted his Project Pitch proposal, NSF’s rejections were driven, in whole or at least in substantial part, by their personal biases against Plaintiff and not by the proper criteria for assessing the merits of such which NSF must utilize.

91. On March 25, 2021, after Plaintiff’s initial Project Pitch proposals were denied (in an arbitrary and unlawful manner), Plaintiff submitted a complaint of discrimination to NSF’s Office of Equity and Civil Rights (OECD).

92. Plaintiff understands that the OECD did not substantively investigate Plaintiff’s complaint but rather, it took the position that “it was not able to accept” Plaintiff’s complaint and its allegations “for investigation” because “There is no law, regulation, or executive order addressing discrimination on the basis of race or national origin that applies to NSF’s conducted or operated programs, such as the review of Project Pitch documents or funding proposals submitted to NSF.”

93. This determination by OECD is wrong as a matter of law. *See* 13 C.F.R. § 112 (“The purpose of this part is to effectuate the provisions of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the *Act*) to the end that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any financial assistance activities of the Small Business Administration to which the Act applies.”).
94. At and after that time, Plaintiff made numerous efforts to try and meet with NSF personnel in order to further explain the merits of his Project Pitch proposal and also to better understand why it was being rejected. Plaintiff was denied such opportunities under circumstances which demonstrate the illegal and discriminatory motivations of NSF’s personnel.
95. On two occasions – August 2023 and July 2024 –Plaintiff and his son traveled from India to attend committee meetings open to the public, including panel discussions on 'Merit Review Criteria' and 'Scientific Integrity,' held at the NSF’s headquarters (2415 Eisenhower Avenue, Alexandria, Virginia 22314).
96. Plaintiff and his son spent several hours each day over the course of three days approaching NSF officers during breaks, pleading for an opportunity to explain the violations and obstacles that have caused harm and impeded scientific and engineering progress. Despite enduring humiliation and repeated dismissals, a couple of NSF staff members agreed to meet with Plaintiff for 15 to 20 minutes, following a reference from the Director of the NSF and members of the NSB. The staff members requested that the Plaintiff call them in two or three days to schedule a longer meeting, citing their preoccupation with the ongoing event.
97. In reliance upon these assurances from NSF personnel, Plaintiff and his son stayed in the Washington D.C. area for three weeks, sending multiple emails and leaving voice messages, as the NSF staff members could not directly be reached by phone. However, none of the NSF staff responded to Plaintiff’s emails or messages for three long weeks.
98. Plaintiff can only conclude, based upon these factual events, that at some point in time after Plaintiff first submitted his Project Pitch proposal, this became “personal” on the part of NSF personnel towards him and his proposals, that NSF personnel began rejecting such not based upon the failure of Plaintiff to submit a proposal which fully met the criterio to be able to pursue Phase I – SBIR funding but rather, based upon some personal discriminatory motivation against Plaintiff due to his race and ethnicity and due to the accent that is noticeable when he speaks in English.
99. Through this, Plaintiff has been denied the respect and dignity and fair, equal treatment that he is entitled to receive as a U.S. Citizen, which the law requires.
100. Moreover, through this and the other unlawful conduct of NSF, those within the software industry, as well as its consumers (i.e., the public, within American and beyond) have been denied the benefits of Plaintiff’s important theory and the paradigm-shifting changes that such

will bring.

101. Importantly, the wrongful and illegal nature of NSF's Project Pitch screening process is further demonstrated through the fact that Plaintiff and other proposers who are told "no" by NSF concerning their Project Pitch proposal have no mechanism through which to appeal or otherwise challenge such decision. As a result, Plaintiff (and other similarly situated proposers who are not invited to do so) are not able to submit a full Phase I – SBIR funding proposal in the face of NSF's rejection (during a period of time specified by NSF).
102. Plaintiff has dedicated the past 23 years of his life to address one of the greatest technological challenges (known as the software crisis) that has eluded software researchers since 1970. Plaintiff has made necessary, paradigm-challenging groundbreaking discoveries and secured patents for transformative inventions that can address this infamous software crisis. Instead of being treated with the dignity and respect that any U.S. Citizen deserves, NSF effectively stonewalled Plaintiff and further, baselessly rejected his proposals which Plaintiff now understands was unlawful and illegal.
103. Moreover, NSF has employed a similar, subjective process to review and, upon information and belief, reject hundreds (if not over a thousand) other proposals through its SBIR program, under circumstances that are the same or closely comparable to those faced by Plaintiff. Upon information and belief, many of these submissions were validated but rejected by unqualified reviewers who failed to assess them against the primary criterion of "Intellectual Merit" and the secondary criterion of the broader impacts derived from it.
104. NSF's unlawful intent is further demonstrated through comments that Plaintiff and others provided in response to a public notice regarding NSF's SBIR/STTR Fast-Track Pilot Pre-submission Project Pitch Form, which had a deadline of August 19, 2024. It appears that these comments, which highlighted the empowerment of unqualified reviewers to validate patented deep-tech inventions based on new scientific discoveries—violating the principles of the Merit Review and Scientific Integrity Policy—have been ignored or suppressed.
105. Plaintiff and others also submitted comments for the 'Request for Information (RFI) on the National Science Board-National Science Foundation Merit Review Commission Review of NSF's Merit Review Policy and Processes,' with a deadline of September 18, 2024. These comments underscored the inappropriate empowerment of unqualified reviewers to determine the outcomes of genuine, paradigm-challenging breakthroughs, contravening the Scientific Integrity Policy.
106. NSF's officers not only unlawfully empowered unqualified reviewers to determine the fate of the Plaintiff's submissions but also retaliated against the Plaintiff for raising concerns about these violations.

H. The Harm & Damages caused by the NSF's Wrongful and Illegal Conduct

107. Plaintiff made his submissions by relying on the following enticing commitments and statements in the NSF/SBIR solicitation: (i) a prominent banner on the homepage stating, "We support R&D of deep technologies – those based on discoveries in fundamental science and engineering"; (ii) statements in the official solicitation document, including, "The NSF SBIR/STTR programs solicit proposals from small businesses based on groundbreaking scientific discoveries or significant engineering breakthroughs"; and (iii) the primary intellectual merit criterion, "creative, original, and potentially transformative concepts."
108. Given NSF's claims and its primary function to solicit, identify, and support meritorious submissions per the NSB's Merit Review Criteria, NSF had the fundamental obligation to use qualified reviewers to determine the fate of paradigm-challenging breakthroughs. With 70 years of operational experience and an annual budget exceeding \$9 billion, it is equally unfathomable that the NSF would not only overlook but also suppress Plaintiff's repeated petitions regarding the fact that allowing unqualified reviewers to assess such work constitutes professional misconduct, misappropriation of funds, and malpractice — especially considering the harm this practice could inflict on the research ecosystem and transformative breakthroughs.
109. Reviewers who lack the necessary educational background or related work experience to substantively evaluate the intellectual merit and broader impact of a submission should not be tasked with reviewing submissions that genuinely satisfy the principles and policies of the NSB's Merit Review Criteria, including paradigm-challenging and transformative patented technological breakthroughs. Empowering unqualified professionals to carry out their core and crucial functions within any organization is wrongful and in this instance, unlawful, which causes significant damage and irreparable harm.
110. Many reviewers of 'Project Pitches' appear to have training or backgrounds in assessing business plans and are primarily selecting business ideas (e.g., for products or services) that utilize the latest technologies such as Big Data, IoT, or AI (Artificial Intelligence), which often do not meet the policies and principles of the NSB's Merit Review Criteria, while rejecting submissions that have potential to create new, yet unobvious patentable technologies and scientific insights aligned with the NSB's Merit Review Criteria.
111. Plaintiff experienced retaliation and racial discrimination for submitting reports or sending emails containing evidence showing that NSF reviewers, who lacked proper qualifications, acted in ways that conflicted with NSF's core mission, policies, and principles (and ultimately, as later discovered, its legal obligations).
112. As a result of NSF's wrongful and unlawful conduct, Plaintiff and dozens (if not hundreds) of others who submitted proposals meeting the policies and principles of the NSB's Merit Review Criteria have suffered damage. Numerous highly deserving projects that likely would have been funded under the previous system, before NSF wrongfully began using its "Project Pitch" screening process, are now being rejected by unqualified reviewers. Most reviewers

reject submissions they do not understand, offering no benefit of the doubt for deserving proposals they lack the qualifications to assess accurately or objectively.

I. Plaintiff's opportunity to further explore and enhance his transformative theories, with the support of NSF, was wrongfully denied

113. Plaintiff has been seeking the opportunity to present to NSF valid and verifiable scientific evidence that can prove two material facts: (i) that the Body of Knowledge (BoK) within the existing theoretical foundation for CBSE meets numerous rules, principles, standards, and conditions qualifying it as pseudoscience (i.e., unscientific or flawed paradigm), akin to the miasma and geocentric paradigms; and (ii) that the BoK for the proposed theoretical foundation for CBSE, known as Componentology, meets every conceivable rule, principle, standard, and condition to qualify as hard science, akin to Germ Theory and the Heliocentric paradigm.
114. Plaintiff has secured eight patents which support these two material facts, which must be presumed valid until refuted. Plaintiff, along with a couple of dozen software engineers who have worked with him at various times over the past 23 years, has been unable to find any evidence inconsistent with the above two material facts, which serves to demonstrate the transformative nature of CBSE.
115. Pseudoscience can be defined as any academic discipline whose BoK comprises numerous parts or components, such as theories, concepts, methods, descriptions, and explanations, and which is promoted as science despite a significant or majority portion of these components failing to meet acceptable objective standards or scientific criteria. The existing theoretical foundation for CBSE consists of numerous theories, concepts, methods, descriptions, and explanations, most of which (over 75%) can be classified as unscientific or pseudoscientific.
116. Since 2020, Plaintiff has exercised his First Amendment right to petition NSF and at times, to protest the unfair and unlawful manner in which his proposals (aimed at replacing pseudoscience in the existing theoretical foundation with valid hard science he has developed since 2003) have been handled. Plaintiff submits that the wrongful manner in which his proposals were handled by NSF are wholly inconsistent with the principles of fairness, accountability, and transparency mandated by the America COMPETES Act.
117. While Plaintiff's experience with and treatment by NSF, against the backdrop of history, is not uncommon, it should not be tolerated. Almost every researcher who has made paradigm-challenging discoveries with the potential to subvert a deeply entrenched and widely practiced dominant paradigm has struggled to secure opportunities to present valid and verifiable scientific evidence. The mainstream scientific community has often refused to extend the benefit of the doubt to iconoclastic discoveries that expose flawed foundational assumptions within widely practiced yet misguided paradigms of the time. Researchers with ethics and integrity do not seek blind belief; rather, they request the benefit of the doubt to secure an opportunity to present valid and verifiable evidence to substantiate their iconoclastic discoveries.

118. Historically, nearly every researcher whose discoveries ultimately subverted a dominant paradigm encountered fierce resistance, derision, and hostilities from scientific authorities unwilling to grant the benefit of the doubt – especially in the absence of a legal obligation to do so. However, NSF is legally obligated to extend this benefit, as its mandate is to seek and support paradigm-challenging discoveries by objectively validating scientific evidence that is both valid and verifiable and that holds the potential for transformative breakthroughs. Plaintiff has made multiple submissions to SBIR and ProSPCT, consistently pleading for the benefit of the doubt, only to have his submissions rejected by unqualified reviewers.
119. The best-known definition of revolutions in science or engineering is the successful replacement of a flawed dominant paradigm with a valid scientific paradigm. Every transformative scientific revolution in the past has confronted the issues associated with incommensurability, including fierce resistance, ridicule, and hostility from mainstream orthodoxies. NSF’s unqualified reviewers, whether intentionally or based upon their insufficient education and experience, rejected Componentology, as it is incommensurable, as disclosed by Plaintiff.
120. Plaintiff submits that the incommensurability associated with introducing a newly proposed, valid scientific paradigm – one capable of replacing by subverting the prevailing flawed dominant paradigm – often results in hurdles such as fierce resistance, disdain, and hostility. These challenges are likely proportional (i) to the size of the Body of Knowledge (BoK) that forms the theoretical foundation and shapes the conceptual framework that is essential for practitioners of the flawed paradigm to carry out their work, and (ii) to the number of active practitioners invested in the existing paradigm. Plaintiff has been enduring issues associated with incommensurability for nearly 18 years.
121. Today, software engineering is estimated to have about twenty to thirty million active practitioners worldwide who rely on the conceptual framework shaped by this BoK. The extensive size of the BoK in the theoretical foundation and the tens of millions of active practitioners make the existing software paradigm the largest flawed dominant paradigm ever created. Historically, challenges to deeply entrenched paradigms have often been perceived as arrogant, offensive, or disrespectful – a perception that is further magnified because the Plaintiff is a person of color with weak English skills and an accent.
122. Plaintiff’s First Amendment right to petition, as well as his rights to due process and fair treatment, were violated when his emails and phone number were blocked in response to his requests for the benefit of the doubt. Plaintiff was denied equal and fair treatment, as NSF staff are required to communicate with applicants and provide guidance or feedback tailored to the specific needs of their submissions. As part of their expected duties, NSF staff have not only assisted or guided new applicants in the past but are also currently providing them with guidance and support in understanding policies and procedures.
123. Plaintiff has been unable to find any other research organization, other than NSF, with the necessary influence, financial clout, reach within academic institutions, and legal obligation

to give the benefit of the doubt to paradigm-challenging breakthroughs by U.S. citizens in computer science and software.

124. Plaintiff's submissions to NSF simply request an opportunity to present valid and verifiable evidence supporting his new paradigm, Componentology, urging NSF to evaluate this evidence objectively and in accordance with principles or policies of NSF's Scientific Integrity, NSF's Merit Review and PTR Report. As outlined above, NSF repeatedly and wrongfully denied Plaintiff this critical opportunity.

COUNT I: Judicial Review Under 5 U.S.C. §§ 702, 704, and 706, and
28 U.S.C. 28 U.S.C. § 2201

**(Declare that NSF's Project Pitch Screening Process is Unlawful and
Issue Injunctive Relief Against Project Pitch)**

125. Plaintiff incorporates by reference the allegations set forth in the foregoing Paragraphs as if fully set forth herein.

126. 5 U.S.C. § 706 provides:

“To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.”

127. As outlined above, in evaluating proposals to award funding, NSF must use a merit-based review process.

128. Such is required, *inter alia*, by 15 U.S.C. § 638(s); by the policies set by the National Science Board; by NSF's own policies, which it has acknowledged to Congress it is required to follow; by the Framework for Federal Scientific Integrity Policy and Practice (issued by the White House Office of Science and Technology); and by fundamental principles of fairness and reasonableness, because it is axiomatic that a proposal for funding can only be meaningfully reviewed by persons who are qualified to do so.
129. Use of a merit-based review process requires NSF to evaluate the intellectual merit as well as the broader impact of any proposal for funding.
130. A key aspect of a merit-based review process is use of substantively qualified, external reviewers, which NSF acknowledges it must do to, for example, to evaluate Phase I – SBIR proposals.
131. Despite this, in 2019, NSF determined that it would screen out proposals through a pre-screening, suitability determination to assess whether a proposal for funding was a good “fit.” Through such, NSF created Project Pitch, which constitutes its screening process to weed out proposals, without using a merit-based review process, to lessen the purported burdens upon NSF's staff.
132. NSF determined that it would use Project Pitch, and implemented such decision, without engaging in notice and comment rulemaking.
133. NSF's use of Project Pitch features use of NSF staff who, in relation to Plaintiff's proposals and upon information and belief, in relation to hundreds of other proposals, are not qualified to substantively evaluate the intellectual merit and broader impact thereof.
134. NSF's use of Project Pitch has also caused significant harm to Plaintiff, and upon information and belief, hundreds of other proposers who have been denied the ability to submit a Phase I – SBIR funding proposal, because NSF's “no” responses have served to prohibit the affected proposer from being able to seek Phase I funding.
135. NSF's determination to use Project Pitch and its implementation thereof are unlawful, because such actions are arbitrary, capricious, not in accordance with applicable law, and without observance of procedures required by applicable law (e.g., 15 U.S.C. § 638(s)).
136. Moreover, any assertion by NSF that its decision to use Project Pitch as a screening mechanism before permitting a proposer to submit a full Phase I – SBIR funding request is entitled to deference should be rejected under *Loper Bright Enterprises v. Raimondo*, 603 U.S. ___, 144 S. Ct. 2244 (2024).
137. As outlined above, it is also clear that at some point after Plaintiff initially submitted his Project Pitch proposal, NSF personnel begin discriminating against Plaintiff him because of his race and ethnicity, to include his accent which is obvious when he speaks and also when

he communicates in writing in English. NSF's refusal to meet with Plaintiff to include, in August 2023 and July 2024, refusing to do so after telling Plaintiff that they would do so, demonstrates the discriminatory motivations of its personnel towards Plaintiff. This further demonstrates the arbitrary, capricious, and otherwise unlawful nature of NSF's rejections of Plaintiff's proposals for funding, which cannot be permitted to continue.

138. Plaintiff has established a new field of study called "Componentology," which is transformative in nature. If validated, approved, and accepted within the field, it would fundamentally change the paradigm of computer software design and production. Plaintiff believes that the use of his theory would:
 - a. Dramatically increase the efficiency of software design, production, and maintenance;
 - b. Significantly improve the safety and reliability of software;
 - c. Accelerate the pace of innovation; and
 - d. Enable the creation of more complex software systems that address issues currently deemed impractical to tackle.
139. Plaintiff submits that a qualified, unbiased reviewer who considers Plaintiff's proposals would readily agree that such are transformative in nature and fully satisfy the criteria of intellectual merit and the broader impact which NSF must apply in considering such for funding. Despite its legal obligations to do so, NSF has failed to utilize the required, merit-based review process, to include its use of unqualified reviewers to evaluate Plaintiff's proposals.
140. Plaintiff has been damaged by NSF's wrongful and unlawful actions. Plaintiff's damages include his loss of Phase I – SBIR funding, currently in the amount of \$275,000.
141. Plaintiff's damages also include irreparable harm, as outlined above.
142. Upon information and belief, dozens (if not hundreds) of other proposers who were denied the opportunity to submit formal funding requests upon the rejection of their submissions through Project Pitch have also been damaged in a similar manner as Plaintiff.
143. Plaintiff requests that this Honorable Court declare that NSF's use of unqualified reviewers to evaluate submissions through its Project Pitch screening process is unlawful and further, order NSF to immediately stop screening such until it utilizes the required merit-based review process, to include qualified reviewers.

COUNT II: Judicial Review Under 5 U.S.C. §§ 702, 704, and 706

(Order that Plaintiff's Project Pitch Proposals be Approved for Phase I Funding or in the Alternative, Order that NSF Evaluate Such Using the Required Merit-Based Review Process, to Include the Use of Substantively Qualified, External Reviewers)

144. Plaintiff incorporates by reference the allegations set forth in the foregoing Paragraphs as if fully set forth herein.

145. In addition to the forms of relief referenced above, 5 U.S.C. § 706 also provides that this Honorable Court “shall (1) compel agency action unlawfully withheld or unreasonably delayed”
146. In evaluating proposals to award funding, NSF must use a merit-based review process.
147. Such is required by law and other applicable authority.
148. Use of a merit-based review process requires NSF to evaluate the intellectual merit as well as the broader impact of any proposal for funding.
149. A key aspect of a merit-based review process is the use of substantively qualified, external reviewers, which NSF acknowledges it must do to, for example, evaluate Phase I – SBIR proposals.
150. Despite this, since 2019, and continuing to present, NSF is not using qualified reviewers to substantively review Project Pitch proposals.
151. NSF’s use of Project Pitch features use of NSF staff who, in relation to Plaintiff’s proposals and upon information and belief, in relation to hundreds of other proposals, are not qualified to substantively evaluate the intellectual merit and broader impact thereof.
152. NSF’s use of unqualified reviewers for Project Pitch proposals has caused significant harm to Plaintiff, as well as, upon information and belief, to hundreds of other proposers were denied the opportunity to submit a Phase I – SBIR proposal based upon NSF’s illegal screening under Project Pitch have also been damaged in a similar manner as Plaintiff.
153. It is also clear that at some point after Plaintiff initially submitted his Project Pitch proposal, NSF personnel begin discriminating against Plaintiff based upon his race and ethnicity, to include his accent which is obvious when he speaks and communicates in writing in English. NSF’s refusal to meet with Plaintiff to include, in August 2023 and July 2024, refusing to do so after telling Plaintiff that they would do so, demonstrates such wrongful and illegal motivations by NSF’s personnel towards Plaintiff. This also further demonstrates the arbitrary and capricious nature of NSF’s rejections of Plaintiff’s proposals for funding, which cannot be permitted to continue.
154. Plaintiff has established a new field of study called "Componentology," which is transformative in nature. If validated, approved, and accepted within the field, it would fundamentally change the paradigm of computer software design and production. Plaintiff believes that the use of his theory would:

- a. Dramatically increase the efficiency of software design, production, and maintenance;
 - b. Significantly improve the safety and reliability of software;
 - c. Accelerate the pace of innovation; and
 - d. Enable the creation of more complex software systems that address issues currently deemed impractical to tackle.
155. Plaintiff submits that a qualified, unbiased reviewer(s) who considers Plaintiff's proposals would readily agree that such are transformative in nature and fully satisfy the criteria of intellectual merit and the broader impact which NSF must apply in considering such for funding. As a result, Plaintiff requests that this Honorable Court order NSF to approve Plaintiff's Project Pitch Proposals for Phase I funding after conducting a hearing pursuant to 5 U.S.C. § 706 (F).
156. Alternatively, Plaintiff requests that this Court order NSF to evaluate Plaintiff's proposals using the required merit-based review process, to include the use of substantively qualified, external reviewers.
157. Plaintiff respectfully submits that this requested relief is necessary to help to alleviate the damage, which is ongoing and irreparable, caused to him by NSF's wrongful and unlawful conduct.

COUNT III: Judicial Review Under 5 U.S.C. §§ 702, 704, and 706, and
28 U.S.C. § 2201

**(Declare that NSF's Use of Unqualified Reviews to Evaluate Submissions
Under its ProSPCT Tool Is Unlawful and
Order NSF to Stop Engaging in Such Unlawful Conduct)**

158. Plaintiff incorporates by reference the allegations set forth in the foregoing Paragraphs as if fully set forth herein.
159. In evaluating proposals for funding through use of its ProSPCT tool, NSF must use a merit-based review process, through the NSF's PTR Policy; NSF's own PTR Letter to Congress; the Federal Scientific Integrity Policy; and by fundamental principles of fairness and reasonableness, because it is axiomatic that a proposal for funding can only be meaningfully reviewed by persons who are qualified to do so.
160. Use of a merit-based review process requires NSF to evaluate the intellectual merit as well as the broader impact of any proposal for funding.
161. A key aspect of a merit-based review process is use of substantively qualified, external reviewers, which NSF acknowledges it must do to.
162. Despite this, NSF did not use qualified reviewers to evaluate Plaintiff's proposals which he

submitted through NSF's ProSPCT tool and upon information and belief, NSF is using the same, fundamentally flawed approach with others who utilize this tool to try and obtain funding. *See* allegations, Paragraphs 48 – 56, *supra*.

163. NSF's conduct towards Plaintiff has caused significant harm to him, and upon information and belief, dozens (if not hundreds) of other proposers who have been denied the ability to seek funding through a formal proposal, because of NSF's "no" responses, which have served to prohibit the affected proposer from proceeding to further seek funding.
164. Any assertion by NSF that its decision to use unqualified reviewers concerning submissions made pursuant to its ProSPCT tool is entitled to deference should be rejected under *Loper Bright Enterprises v. Raimondo*, 603 U.S. ___, 144 S. Ct. 2244 (2024).
165. Plaintiff has established a new field of study called "Componentology," which is transformative in nature. If validated, approved, and accepted within the field, it would fundamentally change the paradigm of computer software design and production. Plaintiff believes that the use of his theory would:
 - a. Dramatically increase the efficiency of software design, production, and maintenance;
 - b. Significantly improve the safety and reliability of software;
 - c. Accelerate the pace of innovation; and
 - d. Enable the creation of more complex software systems that address issues currently deemed impractical to tackle.
166. Plaintiff has also established a new field of study called "Neuronology," which is a newly proposed branch of science aimed at providing a valid scientific and theoretical foundation for AGI (Artificial General Intelligence), just as Componentology was created to establish a valid foundation for CBSE. *See* Paragraph 53 c., *supra*.
167. Plaintiff submits that a qualified, unbiased reviewer who considers Plaintiff's proposals would readily agree that such are transformative in nature and fully satisfy the criteria of intellectual merit and the broader impact which NSF must apply in considering such for funding.
168. Upon information and belief, dozens (if not hundreds) of other proposers who were denied the opportunity to pursue formal funding through NSF's funding programs based upon its use of unqualified reviewers for submissions using its ProSPCT tool have also been damaged in a similar manner as Plaintiff.
169. Plaintiff requests that this Honorable Court declare that use of unqualified reviewers in this manner is unlawful.
170. This conduct by NSF violates the requirements for its review of submissions through ProSPCT, based upon the provisions of NSF's PTR Policy; NSF's own PTR Letter to Congress; and the Federal Scientific Integrity Policy.

171. Plaintiff submits that a qualified, unbiased reviewer who considers Plaintiff's proposals would readily agree that such are transformative in nature and fully satisfy the criteria of intellectual merit and the broader impact which NSF must apply in considering such for funding. Despite its legal obligations to do so, NSF has failed to utilize the required, merit-based review process, to include its use of unqualified reviewers to evaluate Plaintiff's proposals.
172. Plaintiff has been damaged by NSF's wrongful and unlawful actions. Plaintiff's damages include his loss of the opportunity to obtain NSF funding, at least in the amount of \$275,000.
173. Plaintiff's damages also include irreparable harm, as outlined above.
174. Upon information and belief, other proposers were denied the opportunity to submit formal funding requests upon their submissions using NSF's ProSPCT tool and have also been damaged in a similar manner as Plaintiff.
175. Plaintiff requests that this Honorable Court declare that NSF's use of unqualified reviewers to evaluate submissions through its ProSPCT tool is unlawful and further, order NSF to immediately stop screening such until it utilizes the required merit-based review process, to include qualified reviewers.

COUNT IV: Judicial Review Under 5 U.S.C. . §§ 702, 704, and 706

(Order that Plaintiff's Submissions through NSF's ProSPCT Tool be Approved for Funding or in the Alternative, Order that NSF Evaluate Such Using the Required Merit-Based Review Process, to Include Use of Substantively Qualified, External Reviewers)

176. Plaintiff incorporates by reference the allegations set forth in the foregoing Paragraphs as if fully set forth herein.
177. In addition to the forms of relief referenced above, 5 U.S.C. § 706 also provides that this Honorable Court "shall (1) compel agency action unlawfully withheld or unreasonably delayed"
178. In evaluating proposals for funding through use of its ProSPCT tool, NSF must use a merit-based review process. This is required through the NSF's PTR Policy; NSF's own PTR Letter to Congress; the Federal Scientific Integrity Policy; and by fundamental principles of fairness and reasonableness, because it is axiomatic that a proposal for funding can only be meaningfully reviewed by persons who are qualified to do so.
179. Use of a merit-based review process requires NSF to evaluate the intellectual merit as well as the broader impact of any proposal for funding.
180. A key aspect of a merit-based review process is use of substantively qualified, external

reviewers, which NSF acknowledges it must do to.

181. Despite this, NSF did not use qualified reviewers to evaluate Plaintiff's proposals which he submitted through NSF's ProSPCT tool and upon information and belief, NSF has used and is continuing to use the same approach with others who utilize this tool to try and obtain funding.
182. NSF's conduct towards Plaintiff has caused significant harm to him, to include irreparable harm.
183. Upon information and belief, dozens (if not hundreds) of other proposers who were denied the opportunity to pursue formal funding through NSF's funding programs based upon its use of unqualified reviewers for submissions using its ProSPCT tool have also been damaged in a similar manner as Plaintiff.
184. Any assertion by NSF that its decision to use unqualified reviewers to evaluate proposals submitted through its ProSPCT tool as a screening mechanism before permitting a proposer to submit a formal funding request is entitled to deference should be rejected under *Loper Bright Enterprises v. Raimondo*, 603 U.S. ___, 144 S. Ct. 2244 (2024).
185. Plaintiff has established a new field of study called "Componentology," which is transformative in nature. If validated, approved, and accepted within the field, it would fundamentally change the paradigm of computer software design and production. Plaintiff believes that the use of his theory would:
 - a. Dramatically increase the efficiency of software design, production, and maintenance;
 - b. Significantly improve the safety and reliability of software;
 - c. Accelerate the pace of innovation; and
 - d. Enable the creation of more complex software systems that address issues currently deemed impractical to tackle.
186. Plaintiff has also established a new field of study called "Neuronology," which is a newly proposed branch of science aimed at providing a valid scientific and theoretical foundation for AGI (Artificial General Intelligence), just as Componentology was created to establish a valid foundation for CBSE. *See* Paragraph 53 c., *supra*.
187. Plaintiff submits that a qualified, unbiased reviewer(s) who considers Plaintiff's proposals would readily agree that such are transformative in nature and fully satisfy the criteria of intellectual merit and the broader impact which NSF must apply in considering such for funding. As a result, Plaintiff requests that this Honorable Court order NSF to approve Plaintiff's proposals submitted through its ProSPCT for funding, after conducting a hearing pursuant to 5 U.S.C. § 706 (F).
188. Alternatively, Plaintiff requests that this Court order NSF to evaluate Plaintiff's proposals

using the required merit-based review process, to include the use of substantively qualified, external reviewers.

189. Plaintiff respectfully submits that this requested relief is necessary to help to alleviate the damage, which is ongoing and irreparable, caused to him by NSF's wrongful and unlawful conduct.

Count V
Violation of the First Amendment of the United States Constitution –
Right to Petition

190. Plaintiff incorporates by reference the allegations set forth in the foregoing Paragraphs as if fully set forth herein.
191. The First Amendment prohibits Congress from making laws “abridging the freedom of speech . . . or the right of the people . . . to petition the Government for a redress of grievances.” This prohibition applies to restrictions on speech by all branches of the federal government. *Matal v. Tam*, 137 S. Ct. 1744, 1757 (2017).
192. The right to petition the Government includes the right of Plaintiff to communicate with personnel from NSF about his Project Pitch proposals as well as his submissions through NSF's ProSPCT tool.
193. As outlined above, on and after November 20, 2020, NSF personnel blocked emails and phone calls from Plaintiff, through which he sought to communicate with NSF personnel about his proposals. More specifically, in an email message of November 17, 2020, Carol Bessel stated:
- “Since I know that many of you are getting copied on all of Mr. Chiluvuri's emails: **Please just ignore his emails (and you might screen your calls a bit – he has called me from area code 919). NSF is working hard to block his correspondence** - he seems to be changing addresses and so it is difficult. If you have any questions or concerns, please let me know. I am sorry this keeps coming to your inbox....” (Emphasis added).
194. Plaintiff was not advised by NSF personnel that it had taken this action against Plaintiff. Rather, Plaintiff learned of this email, and the details of NSF's conduct in blocking his emails and phone calls, through the aforementioned FOIA lawsuit that he filed against NSF in 2024.
195. Upon information and belief, NSF has continued to block Plaintiff's emails and block or otherwise screen out Plaintiff's phone calls.
196. Defendants' actions violate the First Amendment and Plaintiff's right to petition the Government – in this case, NSF – regarding his proposals, first for Project Pitch and later on, his submissions through the agency's ProSPCT tool.

197. This conduct has damaged Plaintiff and caused him to suffer irreparable harm, as he has not been given the opportunity – which any citizen should have been given – to meaningfully communicate with NSF and its personnel about these critical issues.
198. Upon information and belief, this conduct, and the irreparable harm which it has caused Plaintiff to experience, is apparently ongoing.
199. This Court has inherent authority to declare, enjoin, restrain, enter judgment, and impose penalties on Defendants and other federal actors, and those acting in concert with them, to prevent and restrain violations of federal law, including the First Amendment. “The ability to sue to enjoin unconstitutional actions by state and federal officers is the creation of courts of equity, and reflects a long history of judicial review of illegal executive action, tracing back to England.” *Armstrong v. Exceptional Child Center, Inc.*, 575 U.S. 320, 327 (2015).

Count VI
Violation of the First Amendment of the United States Constitution –
Retaliation

200. Plaintiff incorporates by reference the allegations set forth in the foregoing Paragraphs as if fully set forth herein.
201. Retaliation against a U.S. citizen by the Federal Government for the exercise of his First Amendment Rights is prohibited.
202. As outlined above, Plaintiff exercised his First Amendment right to petition NSF, through his submissions of proposals (through Project Pitch and later, through the agency’s ProSPCT tool), as well as through attempts, by email and phone, to communicate with NSF’s personnel about such proposals and the critical issues addressed therein.
203. Plaintiff has learned that on and after November 17, 2020, NSF personnel blocked his emails and phone calls.
204. Upon information and belief, at or after November 17, 2020, NSF’s personnel also began denying Plaintiff’s proposals because he engaged in protected speech and exercised his right to petition NSF.
205. Such conduct by Defendants towards Plaintiff would chill a person of ordinary firmness from continuing to engage in this type of protected activity.
206. Plaintiff’s communications to NSF – to include his proposals and additional communications with its personnel regarding such – was a substantial or motivating factor in Defendants’ wrongful conduct towards him.

207. This conduct has damaged Plaintiff and caused him to suffer irreparable harm, as he has not been given the opportunity – which any citizen should have been given – to meaningfully communicate with NSF and its personnel about these critical issues.
208. Upon information and belief, this conduct, and the irreparable harm which it has caused Plaintiff to experience, is ongoing.
209. As noted above, this Court has inherent authority to declare, enjoin, restrain, enter judgment, and impose penalties on Defendants and other federal actors, and those acting in concert with them, to prevent and restrain violations of federal law, including the First Amendment, and Plaintiff seeks such relief in this case.

Count VII
Violation of the Fifth Amendment of the United States Constitution –
Equal Protection

210. Plaintiff incorporates by reference the allegations set forth in the foregoing Paragraphs as if fully set forth herein.
211. The Fourteenth Amendment of the Constitution provides that:
- “All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.”
212. The Fourteenth Amendment has been held applicable to the Federal Government through the Fifth Amendment, to prohibit the Federal Government from denying its citizens’ equal protection rights under the law.
213. The Fifth Amendment also prohibits the Federal Government from depriving any person of “life, liberty, or property, without due process of law.”
214. As outlined above, Plaintiff exercised his First Amendment right to petition NSF, through his submissions of proposals (through Project Pitch and later, through the agency’s ProSPCT tool), as well as through attempts, by email and phone, to communicate with NSF’s personnel about such proposals and the critical issues addressed therein.
215. Plaintiff has learned that on and after November 17, 2020, NSF personnel blocked his emails and phone calls.

216. Upon information and belief, at or after November 17, 2020, NSF's personnel also began denying Plaintiff's proposals because he engaged in protected speech and exercised his right to petition NSF.
217. As outlined above, Plaintiff believes and alleges that such occurred, in whole or substantial part, because he exercised his First Amendment rights to petition NSF, through submission of his proposals and also through his communications (and attempted communications) with NSF's personnel about the critical issues raised therein.
218. As outlined above, Plaintiff also believes that such occurred, in whole or substantial part, because of his race and ethnicity, to include his accent and difficulties when communicating in English. Upon information and belief, Plaintiff believes that NSF has not blocked the emails or phone calls of any other person who has submitted proposals through Project Pitch or through its ProSPCT tool and further, attempted to communicate with NSF about such matters, to include any such proposers who are not Asian and of Indian descent.
219. Such conduct by Defendants violated Plaintiffs' due process rights under the Fifth Amendment, as his right to petition NSF, under the First Amendment, is an important legal right and property interest. Moreover, such conduct by Defendants violated Plaintiff's equal protection rights.
220. This conduct has damaged Plaintiff and caused him to suffer irreparable harm, as he has not been given the opportunity – which any citizen should have been given – to meaningfully communicate with NSF and its personnel about these critical issues.
221. Upon information and belief, this conduct, and the irreparable harm which it has caused Plaintiff to experience, is ongoing.
222. As noted above, this Court has inherent authority to declare, enjoin, restrain, enter judgment, and impose penalties on Defendants and other federal actors, and those acting in concert with them, to prevent and restrain violations of federal law, including the Fifth Amendment, and Plaintiff seeks such relief in this case.

Demand for Relief

WHEREFORE, Plaintiff respectfully requests this Court to order the following relief to Plaintiff, against Defendant U.S. National Science Foundation:

- A. Issue declaratory relief that NSF's use of Project Pitch as a screening process is arbitrary and capricious and unlawful;
- B. Temporarily and permanently enjoin NSF from using unqualified reviewers to evaluate submissions for "Project Pitch" proposals;
- C. Temporarily and permanently enjoin NSF from otherwise violating the required merit-based review process in evaluating proposals for funding, including proposals under Project Pitch and for Phase I – SBIR funding;
- D. Order that Plaintiff's Project Pitch proposals be approved for Phase I – SBIR funding or in the alternative, order that NSF evaluate such using the required merit-based review process, to include the use of substantively qualified, external reviewers.
- E. Issue declaratory relief that NSF's use of unqualified reviewers to evaluate proposals submitted through its ProSPCT tool is arbitrary and capricious and unlawful;
- F. Temporarily and permanently enjoin NSF from using unqualified reviewers to evaluate submissions through its ProSPCT tool;
- G. Temporarily and permanently enjoin NSF from otherwise violating the merit-based review process in evaluating proposals submitted through its ProSPCT tool;
- H. Order that Plaintiff's submissions through NSF's ProSPCT tool be approved for funding or in the alternative, order NSF to evaluate such using the required merit-based review process, to include the use of substantively qualified, external reviewers;
- I. Award Plaintiff the costs of bringing this action, and which he has otherwise incurred in pursuing his proposals, to include his reasonable attorneys' fees and costs, pursuant to 5 U.S.C. § 552(a)(4)(E); and
- J. Award Plaintiff any other relief which the Court deems to be fair and just.

Jury Trial Demand: Plaintiff demands a trial by jury for Counts V, VI, and VII, and otherwise on any other counts which are so triable under applicable law.

Dated: November 15, 2024

Respectfully submitted,

/s/ John B. Flood

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